

**REMARKS**

The withdrawal of the restriction requirement is acknowledged with appreciation.

The drawings were objected to as failing to comply with 37 C.F.R. § 1.84(p) (5) because they did not include the following reference signs mentioned in the description, i.e., 18. Further, the drawings were objected to under 37 C.F.R. § 1.83(a).

The following corrections have been made to Figure 2: Add Reference No. 18 and leader line directed to the inlet. Further, other corrections have been made to correspond with Figure 3 and the Specification.

Reference No. 48 and leader line is redrawn to be directed towards the plunger. The original Reference No. 48 has now been changed to No. 56 for a non-conductive stop insert.

Reference No. 34 is listed twice in Figure 2. The uppermost Reference No. 34 has been corrected to be Reference No. 46 for the valve stop. The uppermost Reference No. 46 and leader line has been deleted.

The Replacement Sheet for Figure 2 is Appendix A following this Amendment. The Annotated Sheet showing the aforementioned changes is in Appendix B following this Amendment.

Claim 6 has been corrected to correctly claim the relationship between the spring diameter and the diameter of the pocket. The Amendment to claim 6 should overcome the objection under 37 C.F.R. § 1.83(a).

The Examiner requested a number of suggestions to the claims. Claims 3 - 7 have been amended to incorporate the corrections as suggested by the Examiner.

Claim 6 was rejected under 35 U.S.C. § 112, 1st paragraph as failing to comply with the enablement requirement. In particular, claim 6 required a spring having an outer diameter at least fifty percent greater than the diameter of the pocket. Claim 6 has now been amended to require that the spring has an outer diameter of at

least fifty percent of the diameter of the pocket. The Amendment to claim 6 should overcome the rejection under 35 U.S.C. § 112. Claim 6 has also been amended to be dependent upon claim 5 rather than claim 4. This Amendment to claim 6 should overcome the rejection under 35 U.S.C. § 112, 2d paragraph.

Claims 1 - 3 and 7 - 9 were rejected under 35 U.S.C. § 102(b) as being anticipated by DuHack (U. S. Patent No. 4,936,337). Further, claims 1 and 5 were rejected under 35 U.S.C. § 102(b) as being anticipated by or in the alternative under 35 U.S.C. § 103(a) as obvious over Numoto et al. (U. S. Patent No. 5,246,199).

Claim 1 has now been amended to require that the plunger includes a pocket as well as a central bore wherein a portion of the valve stop is disposed within the pocket. This feature is not shown or disclosed in the DuHack or Numoto patents. Although the Numoto disclosure shows a pocket within the plunger, a portion of the valve stop 5 in Numoto is not disposed within the plunger. The configuration of the plunger and valve stop of the present invention ensures that the spring is aligned with each other and with the outlet. The configuration of the present invention also ensures that there is an air gap which creates a path for a magnetic flux to travel. Claim 1 is now believed to be allowable.

The rejection of claim 4 under 35 U.S.C. § 103(a) as being unpatentable over DuHack and, further, in view of Frank (U. S. Patent No. 6,105,931) is traversed. The Examiner alleges that Frank discloses a non-conductive plastic insert for receiving the valve stop in an end proximal plunger. The non-conductive plastic in Frank is not an insert according to the definition of an insert in the present invention. Frank only discloses a non-conductive plastic coating which is applied on the valve stop end. Nothing in the Frank patent discusses an insert received in the end of the valve stop. Therefore, claim 4 is believed to be distinguished from DuHack and Frank.

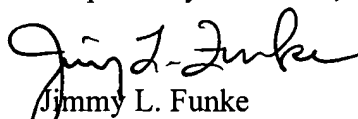
Claim 8 has now been amended to claim a method of manufacturing a valve assembly having a plunger reciprocally movable within the valve assembly between a valve stop and a valve seat. Claim 8 also now requires the additional

requirement of providing a bore in an end of the valve stop and press fitting a non-conductive insert into the bore of the valve stop. These method steps are not shown or disclosed in any of the prior art. Therefore, claim 8 is believed to be allowable.

Claim 9 is cancelled. Claims 10 - 14 are added and are ultimately dependent upon claim 1. New claim 10 requires that a portion of the valve stop disposed within the pocket is at least a portion of the non-conductive material. This feature is not shown or disclosed in the prior art. Claim 11 requires that the non-conductive insert has an annular shoulder for retaining a spring within the pocket of the plunger. This feature is also not shown and disclosed in the prior art. Claim 12 requires that the pocket has a predetermined diameter and the spring has an outer diameter at least fifty percent of the diameter of the pocket. This feature is not shown or disclosed in the prior art. Claim 13 further requires a solenoid assembly wherein the valve stop has a conductive body and a non-conductive insert and the plunger has a conductive body and a non-conductive insert, wherein the conductive bodies of the valve stop and plunger are separated by an air gap for creating a path for magnetic flux travel when the solenoid assembly is energized. This feature is not shown in the prior art. New claim 13 requires that the spring is mounted about the non-conductive insert. This feature is also not shown or disclosed in the prior art.

This Amendment should place this case in condition for passing to issue. Such action is requested.

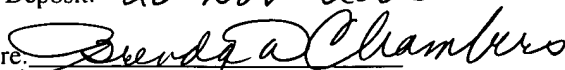
Respectfully submitted,

  
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